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### **Gaze behavior of non- addressed participants in Flemish Sign Language interactions: an eye- tracking study**

Interactions consist of recognizable linguistic units, which can not only be recognized, but also anticipated by interlocutors (e.g. Sacks, Schegloff and Jefferson, 1974; Auer, 2015). Speakers and their addressees collaborate systematically to project turn completion, thereby using syntactic, prosodic and pragmatic resources (e.g. Ford and Thompson, 1996).

The projection of turn endings is supported by evidence of anticipatory gaze behavior in several experimental studies (e.g. Foulsham et al., 2010). Hirvenkari et al. (2013), however, suggest that non-involved viewers shift their gaze to the next speaker only after the beginning of the subsequent turn. Moreover, Holler and Kendrick (2015) analyze gaze behavior of non- addressed participants in face-to- face interaction, thereby focusing on question- answer sequences and suggest that interlocutors orient to turn endings, rather than anticipating (possible) turn completions.

So far there hasn't been a study on the gaze behavior of non- addressed participants in a signed language interaction. Casillas et al. (2015) however, show that non- involved viewers anticipate stroke- to- stroke boundaries in Sign Language of the Netherlands dialogues, i.e. boundaries excluding hold and retraction phases. In this study, anticipatory behavior was made evident by the time observers pressed a button in relation to the timing of the stroke- boundary at the end of a turn. An analysis of projection and anticipatory behavior in face- to- face signed interactions is desirable.

In the current study we want to contribute to the understanding of the online processing of turns- at- talk in Flemish Sign Language (VGT) interactions by providing an analysis of the gaze behavior of non- addressed participants. We want to gain new insights in the timing of gaze shifts of non- addressed participants at turn transitions in relation to both the current and next speakers' turn.

The dataset for this study consists of three 15- minute brainstorm sessions between three native signers of Flemish Sign Language. The interactions were recorded with an external camera and participants were equipped with mobile eye- tracking devices.

Results show that gaze shifts of non- addressed participants occur prior to turn completions. However, if there are multiple possible completions in an ongoing turn- at- talk, non- addressed participants tend not to anticipate those possible completions. Further analysis of the data will provide more insights in the precise timing of the third participants' gaze behavior and in his gaze behavior during overlapping turns in the conversations.

## References

- Auer, P. (2015). The temporality of language in interaction: Projection and latency. In: A. Deppermann, S. Günther (Eds.), *Temporality in interaction*. Amsterdam: John Benjamins Publishing Company, 267- 307.
- Ford, C. E., Thompson, S. A. (1996). Interactional units in conversation: syntactic, intonational, and pragmatic resources for the management of turns. In: E. Ochs, E. A. Schegloff, S. A. Thompson (Eds.), *Interaction and Grammar*. Cambridge: Cambridge University Press, 134–184.
- Foulsham, T., Cheng, J. T., Tracy, J. L., Henrich, J., and Kingstone, A. (2010). Gaze allocation in a dynamic situation: effects of social status and speaking. *Cognition* 117, 319–331.
- Hirvenkari, L., Ruusuvuori, J., Saarinen, V.M., Kivioja, M., Peräkylä, A., Hari, R. (2013). Influence of Turn- Taking in a Two- Person Conversation on the Gaze of a Viewer. *PloS ONE* 8(8), 1-6.
- Holler, J., Kendrick, K. (2015). Unaddressed participants gaze in multi- person interaction: Optimizing reciprocity. *Frontiers in Psychology* 6: 98, 1-14.
- Sacks, H., Schegloff, E., Jefferson, G. (1974). A simplest systematics for the organization of turn-taking for conversation. *Language* 50, 696-735.